AMENDMENTS TO THE ABSTRACT

Please cancel the Abstract section of the specification and replace with the following:

A method of decoding low-density parity-check codes comprises a first step that includes calculating $LLrR_{ml}$, for each parity check equation, at iteration *i*-1, in response to a third step. A second step includes decision aided equalizing, at iteration *i*, in response to the first step. The third step includes calculating $LLrQ_{lm}$, for each parity check equation, at iteration *i* in response to the second step, wherein $LLrQ_{lm}$ represents information from bit node l to equation node m, one for each connection, and wherein $LLrR_{ml}$ represents information from equation node m to bit node l, one for each connection.